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AUTHOR Shucard, Sharon B.; Hillman, Stephen B.
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ABSTRACT

This study investigated the cognitive styles, attributions, and self-evaluations of 40 gifted girls and 40 gifted boys, grades 6 through 8. Informational attributional ratings for task difficulty, luck, ability, and effort were studied in the context of: (1) an individual non-competitive goal structure; (2) a competitive goal structure; (3) success-failure feedback conditions; and (4) gender. Efficacy, satisfaction, reward, and anxiety were also assessed. Subjects performed a task under two conditions, non-competitive and competitive with the results manipulated for success/failure outcome. Subjects were randomly assigned to one of four groups: success followed by success, success followed by failure, failure followed by success, and failure followed by failure. Results revealed that outcome was a critical factor for most variables. Boys approached both tasks with more optimism and regarded the task as more difficult. The competitive condition elicited a diminished perception of ability for girls. Main effects for sex were obtained for efficacy, luck, difficulty and skill. Goal structure influenced some ratings. Unexpectedly, anxiety and effort ratings were non-significant for sex or success-failure outcomes. A task-focused mastery-oriented approach was common in which high effort was maintained in the face of failure. Contains 20 references. (DB)

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Wayne State University

College of Education
Detroit, Michigan 48202

Division of Theoretical and
Behavioral Foundations

Educational and Clinical Psychology

Laboratory for Research on Adolescence

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FEEDBACK AND GOAL CONDITIONS: EFFECTS ON ATTRIBUTIONS OF GIFTED ADOLESCENTS*

SHARON B. SHUCARD
Department of Special Education
Troy School District

STEPHEN B. HILLMAN
Educational Psychology
Wayne State University

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*Paper presented at the 98th Annual Meeting of the American Psychological Association, Boston, MA, August 1990. Correspondence regarding this research should be addressed to: Sharon B. Shucard, Ph.D., Troy School District, Department of Special Education, 1100 Urbancrest, Troy, MI 48083.

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Abstract

Feedback and Goal Conditions: Effects on
Attributions of Gifted Adolescents

Under non-competitive and competitive conditions, 40 gifted girls and 40 gifted boy, grades six through eight, performed tasks manipulated for success and failure. Causal attributions, efficacy, affect and self-reward were evaluated with an informational rating scale. Results revealed that outcome was a critical factor for most variables. Main effects for sex were obtained for efficacy, luck, difficulty and skill. Goal structure influenced some ratings. Unexpectedly, anxiety and effort ratings were non-significant for sex or success-failure outcomes. Results are discussed in terms of motivation and a more ego-enhancing response style for boys.

FEEDBACK AND GOAL CONDITIONS: EFFECTS ON ATTRIBUTIONS OF GIFTED ADOLESCENTS

Attribution theory provides an important framework in which to evaluate causal ascriptions influencing achievement, motivation, and affect (Feather, 1969, 1971; Weiner, 1979). However, attributional patterns identified in various studies are often inconsistent and contradictory.

As investigators attempted to unravel the reasons for inconsistent findings, numerous independent variables were examined, including success-failure conditions (Diener & Dweck, 1978; Wigfield, 1988), competitive and non-competitive conditions (Ames, 1984; Ames & Ames, 1981) and gender (Dweck, Goetz & Strauss, 1980; Schunk & Lilly, 1984).

Ability and effort have been the most common ascriptions for success and failure (Weiner, 1986), and have also been the factors used to differentiate helpless from mastery-oriented children (Diener & Dweck, 1978; Dweck & Repucci, 1973). Effort is often the primary consideration for successful outcomes if academic tasks are utilized (Crombie, 1983; Frieze & Snyder, 1980). However, informational attributions are more likely to elicit task difficulty as the explanation for failure (Whitley & Frieze, 1985). Luck can covary with unexpected outcomes (Weiner, 1986) and outcomes under competitive conditions (Ames & Ames, 1981).

Sex differences have also been evaluated, with varying results. Despite the inconsistent research findings for sex differences, some tendencies have emerged: 1) Females ascribe failure to luck more than males do; 2) Males ascribe failure and success to ability more than females do; and 3) Females exhibit lower self-efficacy (Ames, 1981; Dweck, 1986; Frieze Whitley, Hanusa & McHugh, 1982).

PURPOSE

In contrast to the significant body of research evaluating outcomes and/or sex differences, research applying attribution theory to gifted children has been limited (Bogie & Buckhalt, 1987; Douglas & Powers, 1983; Frieze & Snyder, 1980). Thus, a gifted population was selected for this study to expand the limited knowledge

regarding the cognitive processing of attributions and self-evaluations of gifted adolescents. This study examined the cognitive styles of students who were more capable of abstract thinking and problem solving than younger and/or non-gifted subjects used in prior research.

Feather's (1969, 1971) concepts of "specificity of circumstances" and "cognitive and behavioral adjustments" to explain *unexpected* failure as well as Weiner's tri-dimensional model (Weiner, 1979, 1986) of achievement attributions provided the theoretical structure for this research project.

Informational attribution ratings for task difficulty, luck, ability, and effort made by gifted students were studied in the context of 1) an individual non-competitive goal structure, 2) a competitive goal structure, 3) success-failure feedback conditions, and 4) gender. Efficacy, satisfaction, reward, and anxiety were also assessed. The research paradigms described in Ames (1978) and Ames and Ames (1981) were followed in this study.

METHOD

Subjects

Subject were 40 gifted girls and 40 gifted boys, grades 6 through 8, who were identified as gifted in elementary school through an identification matrix or an individually administered IQ test.

Task

The task required subjects to trace over all the lines of line-puzzle drawings without lifting or retracing any line. Solvable and unsolvable puzzles were used (Ames, 1988, personal communication).

Procedure

Each subject individually performed two tasks in succession. Task one (non-competitive condition) required the subject to "do the best he/she could." Task two (competitive condition) required the subject to "try to do better" than the youngster who had supposedly performed the task earlier. The two tasks were manipulated for a success-failure outcome.

Subjects were randomly assigned to one of four groups: success followed by success, success followed by failure, failure followed by success, and failure followed by failure. Children were debriefed following the experiment.

Dependent Measures

A questionnaire was administered which utilized a nine-point rating scale. For example, the child was asked, "How difficult did you think the task was? If you think it was very difficult, circle 7, 8, or 9 crosses. If you think it was difficult, circle 4, 5, or 6 crosses. If you think the task was not difficult, circle 1, 2, or 3 crosses."

RESULTS

Success contrasted to failure emerged as a critical factor under both goal structure conditions. Table 1 presents descriptive information for success and failure outcomes for both the individual and competitive conditions (see Table 1).

Insert Table 1 about here.

Under the individual, non-competitive goal structure (2 x 2 ANOVA), subjects who succeeded, when compared to subjects who failed, perceived themselves as more skillful, $F(1,76) = 80.04$, $p < .001$ and luckier, $F(1,76) = 116.73$, $p < .001$. Successful subjects found the task less difficult, $F(1,76) = 70.40$, $p < .001$; gave themselves more reward, $F(1,76) = 97.12$, $p < .001$; felt more satisfied, $F(1,76) = 56.84$, $p < .001$; and had greater self-efficacy, $F(1,76) = 36.67$, $p < .001$.

Main effects under the competitive goal structure (4 x 2 ANOVA) were identical to the previous analysis. Means were as follows when contrasting success to failure outcomes: skill — 5.98 vs. 3.25; luck — 5.50 vs. 2.68; difficulty — 3.98 vs. 6.70; reward — 7.13 vs. 3.10; efficacy — 5.70 vs. 4.05; satisfaction — 6.58 vs. 3.15.

Table 2 presents descriptive information comparing boys' scores to girls' scores for both goal structures (see Table 2).

Insert Table 2 about here.

Significant main effects were obtained for sex. Girls evidenced lower pre-efficacy ($M = 5.58$) than did boys ($M = 6.28$), $F(1,76) = 3.93$, $p < .05$. Task 1 and task 2

efficacy ratings were also significantly lower for girls than boys, (F=(1,72)=2.81, p < .05), and F=(1,72)=3.14, p < .05.

Under the individual condition, boys (M = 3.93) gave significantly lower ratings to luck than did girls (M = 5.26), F (1,76) = 5.23, p < .001.

Under the competitive condition, irrespective of outcome, boys (M = 6.43) viewed themselves as more skillful than girls (M = 4.30), F (1,72) = 3.62, p < .05. A group by sex interaction was obtained only for luck ratings (p < .05). Irrespective of goal structures, boys perceived the task as more difficult than did girls (p < .05).

Unexpectedly, for both goal structures, anxiety level and effort ratings were not significantly different for sex or success-failure outcome.

DISCUSSION

For the most part, the attributional style of gifted adolescents following success or failure were similar to other populations, thus replicating and extending previous research. Additionally, observation and inquiry indicated a task-focused, mastery-oriented approach. For example, high effort was maintained in the face of failure. This might explain the lack of increased anxiety following failure, i.e., the children were busy solving the task rather than focusing on their feelings.

Furthermore, these children did not deflect their responsibility for failure. Rather, they took the objectively realistic and possibly ego-defensive stance (Ames, 1981) that they "tried as hard as they could" but that because of factors partly out of their control, such as task difficulty and poor luck, the task could not be accomplished. The cognitive incongruencies generated by the unexpected failure outcome, as described by Feather ((1969, 1971), were resolved through externalization and the perception that circumstances were specific and changeable rather than global and stable. For example, a recency effect was apparent.

Boys appeared to take a more ego-enhancing stance than did girls. Boys approached both tasks with more optimism and regarded the task as more difficult. Boys' and girls' ratings appear to be influenced by goal structure conditions. The competitive condition elicited a diminished perception of ability for girls.

In some instances, girls' anxiety level, self-reward, effort, and skill ratings were not significantly different from boys'. Perhaps girls are becoming better able to perceive themselves more positively than in the past.

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TABLE 1

Means and Standard Deviations for Attributions and Self-Evaluations

Variable	Success X	Success SD	Failure X	Failure SD	p
ABILITY					
Individual	6.13	1.30	3.50	1.34	***
Competitive	5.98	1.29	3.25	1.43	***
TASK DIFFICULTY					
Individual	3.90	1.53	6.38	1.17	***
Competitive	3.98	1.49	6.70	1.36	***
LUCK					
Individual	6.00	1.75	2.58	1.11	***
Competitive	5.50	1.81	2.68	1.25	NA[a]
EFFORT					
Individual	7.08	1.54	6.70	1.29	ns
Competitive	6.88	1.47	6.15	1.75	ns
EFFICACY					
Individual	6.10	1.55	4.03	1.54	***
Competitive	5.70	1.67	4.05	1.43	***
REWARD					
Individual	7.28	1.52	3.63	1.75	***
Competitive	7.13	1.56	3.10	1.41	***
ANXIETY					
Individual	3.35	1.98	3.90	1.86	ns
Competitive	3.50	2.00	3.98	1.78	ns

[a]Not applicable because of significant interaction effect

* $p < .05$

** $p < .01$

*** $p < .001$

TABLE 2

Means and Standard Deviations of Boys and Girls for the Individual and Competitive Conditions

Variable	Boys X	Boys SD	Girls X	Girls SD	p
ABILITY					
Individual	4.93	1.49	4.70	2.19	ns
Competitive	4.90	1.75	4.33	2.07	*a
TASK DIFFICULTY					
Individual	5.48	1.65	4.80	1.98	*
Competitive	5.65	1.93	5.03	1.99	*
LUCK					
Individual	3.93	2.08	4.65	2.39	*
Competitive	4.38	1.98	3.80	2.20	NA[b]
EFFORT					
Individual	6.95	1.55	6.83	1.30	ns
Competitive	6.73	1.63	6.30	1.65	ns
EFFICACY					
Individual	5.35	1.75	4.78	1.94	*a
Competitive	5.18	1.57	4.58	1.89	*a
REWARD					
Individual	5.43	2.35	5.48	2.58	ns
Competitive	5.23	2.49	5.00	2.55	ns
ANXIETY					
Individual	3.78	1.86	3.48	2.01	ns
Competitive	3.78	1.87	3.70	1.94	ns

[a]One-tailed test

[b]Not applicable because of interaction effect

* $p < .05$

** $p < .01$

*** $p < .001$